The Office Action mailed October 23, 2002 objected to the specification and rejected claims 1 and 9 as obvious under 35 U.S.C. § 103 based on *Bayeh* (US 6,223,202) in view of *Johnson et al.* (US 6,330,709), claims 2-5 and 10-13 over *Bayeh* and *Johnson et al.* in view of *Bugnion et al.* (US 6,975,938), claims 6 and 14 over *Bayeh* and *Johnson et al.* in view of *Miner et al.* (US 6,047,053), claims 7 and 15 over *Bayeh* and *Johnson et al.* in view of *Loomans* (US 6,393,605), and claims 8 and 16 over *Bayeh* and *Johnson et al.* in view of *Heiney et al.* (US 6,401,109).

Concerning the objection as to priority under 35 U.S.C. § 120, Applicants do not intend to invoke priority under this section. Therefore, the cross-referencing requirement is moot. Applicants have claimed the benefit, however, of U.S. Provisional Patent Application No. 60/160,759 filed Oct. 21, 1999 and respectfully requests acknowledgement of such in a subsequent action.

The specification is amended to include the serial numbers of the applications incorporated by reference.

The rejection of the claims under § 103 is respectfully traversed because neither *Bayeh* nor *Johnson et al.* teach or otherwise the limitations of the claims. For example, independent claims 1 and 9 recite:

> wherein said first virtual machine instance and said second virtual machine instance are two of a plurality of virtual machine instances, associated with said server, that share access to data stored in **a shared state area allocated in volatile memory** associated with said server.

Accordingly, the claims require "access to data stored in a shared state area allocated **in volatile memory**." The Office Action correctly acknowledges that *Bayeh* fails to explicitly teach this limitation. However, this limitation is also not found in *Johnson et al.*, because *Johnson et al.* discloses that the "JVM can store objects in **either** temporary local storage **or** in **permanent**

SAS storage **220**" (col. 20:9-10). Disclosure of storing in a shared, permanent SAS storage **220** does not amount to a teaching of (and, in fact, teaches against) "allocated in volatile memory." Furthermore, the use of the shared address space (SAS) is only disclosed i n *Johnson et al.* to be between a JVM and an application (col. 20:7-20), not between "two of a plurality of virtual machine instances" as recited in the claims.
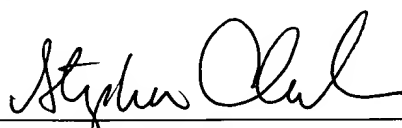
Dependent claims 2-8 and 10-16 are allowable for at least the same reasons as their independent claims and are separately patentable on their own merits. For example, claims 8 and 16 recite "storing a pointer within said data structure to provide access to the data stored in the shared state area," which is not taught in *Bayeh, Johnson et al.*, nor *Heiney et al.*

Therefore, the present application, as amended, overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-425-8516 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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1/23/2003
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APPENDIX

IN THE SPECIFICATION:

Page 1, lines 8-10:

U.S. Provisional Patent Application Serial No. [_____] 60/185,136 entitled MEMORY MANAGEMENT USING MIGRATION FOR A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.[*, (docket 50277-240; OID-1997-048-06PRO)];

Page 1, lines 11-14:

U.S. Provisional Patent Application Serial No. [_____] 60/185,139 entitled METHOD AND ARTICLE FOR MANAGING REFERENCES BETWEEN OBJECTS IN MEMORIES OF DIFFERENT DURATIONS IN A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton[., (docket 50277-257; OID-1997-048-13PRO)];

Page 1, lines 15-18:

U.S. Provisional Patent Application Serial No. [_____] 60/185,138 entitled STATIC OBJECT SYSTEM AND METHODOLOGY FOR IMPLEMENTING A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-215; OID-1997-048-09)];

Page 1, lines 19-21:

U.S. Provisional Patent Application Serial No. [_____] 60/185,134 entitled AURORA NATIVE COMPILATION, filed on February 25, 2000 by Dmitry Nizhegorodov [(docket 50277-324; OID-1997-048-18PRO)];

Page 2, lines 1-4:

U.S. Provisional Patent Application Serial No. [_____] 60/185,137 entitled ACCESSING SHORTER-DURATION INSTANCES OF ACTIVATABLE OBJECTS BASED ON OBJECT REFERENCES STORED IN LONGER-DURATION MEMORY, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-332; OID-1999-084-01PRO)]; and

Page 2, lines 5-8:

U.S. Provisional Patent Application Serial No. [_____] 60/185,135 entitled HANDLING CALLOUTS MADE BY A MULTI-THREADED VIRTUAL MACHINE TO A SINGLE THREADED ENVIRONMENT, filed on February 25, 2000 by Scott Meyer [(docket 50277-332; OID-1997-084-02PRO)].

Page 2, lines 13-15:

U.S. Patent Application Serial No. 09/248,295 entitled MEMORY MANAGEMENT SYSTEM WITHIN A RUN-TIME ENVIRONMENT, filed on February 11, 1999 by Harlan Sexton *et al.* [(docket 50277-178; OID-1997-048-01)] now U.S. Patent No. 6,457,019;

Page 2, lines 16-18:

U.S. Patent Application Serial No. 09/248,291 entitled MACHINE INDEPENDENT MEMORY MANAGEMENT SYSTEM WITHIN A RUN-TIME ENVIRONMENT, filed on February 11, 1999 by Harlan Sexton *et al.* [(docket 50277-172; OID-1997-048-02)] now U.S. Patent No. 6,499,095;

Page 2, lines 19-21:

U.S. Patent Application Serial No. 09/248,294 entitled ADDRESS CALCULATION OF INVARIANT REFERENCES WITHIN A RUN-TIME ENVIRONMENT, filed on February 11, 1999 by Harlan Sexton *et al.* [(docket 50277-179; OID-1997-048-03)];

Page 2, lines 22-24:

U.S. Patent Application Serial No. 09/248,297 entitled PAGED MEMORY MANAGEMENT SYSTEM WITHIN A RUN-TIME ENVIRONMENT, filed on February 11, 1999 by Harlan Sexton *et al.* [(docket 50277-261; OID-1997-048-17)] now U.S. Patent No. 6,434,685;

Page 2, lines 25-27:

U.S. Patent Application Serial No. 09/320,578 entitled METHOD AND ARTICLE FOR ACCESSING SLOTS OF PAGED OBJECTS, filed on May 27, 1999 by Harlan Sexton *et al.* [(docket 50277-293; OID-1998-034-01)] now U.S. Patent No. 6,401,185;

Page 3, lines 1-4:

U.S. Patent Application Serial No. [09/320,578] 09/408,847 entitled METHOD AND ARTICLE FOR MANAGING REFERENCES TO EXTERNAL OBJECTS IN A RUNTIME ENVIRONMENT, filed on [May 27, 1999] September 30, 1999 by Harlan Sexton *et al.* [(docket 50277-293; OID-1998-034-01)] now allowed;

Page 3, lines 5-8:

U.S. Patent Application Serial No. [_____] 09/512,619 entitled METHOD FOR MANAGING MEMORY USING EXPLICIT, LAZY INITALIZATION IN A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-214; OID-1997-048-07)];

Page 3, lines 9-12:

U.S. Patent Application Serial No. [_____] 09/512,622 entitled METHOD FOR MANAGING MEMORY USING ACTIVATION-DRIVEN INITIALIZATION IN A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-213; OID-1997-048-08)];

Page 3, lines 13-16:

U.S. Patent Application Serial No. [_____] 09/512,621 entitled SYSTEM AND [METHODLOGY] METHODOLOGY FOR SUPPORTING A PLATFORM INDEPENDENT OBJECT FORMAT FOR A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-258; OID-1997-048-14)]; and

Page 3, lines 17-20:

U.S. Patent Application Serial No. [_____] 09/512,618 entitled METHOD AND APPARATUS FOR MANAGING SHARED MEMORY IN A RUN-TIME ENVIRONMENT, filed on February 25, 2000 by Harlan Sexton *et al.* [(docket 50277-259; OID-1997-048-15).]

IN THE CLAIMS:

8. (Once Amended) The method of Claim 1 further comprising the steps of:

spawning the first virtual machine instance by instantiating a data structure associated with a

single session; and

[changing the state of said first virtual machine instance during execution of said virtual

machine code by manipulating data] storing a pointer within said data structure to provide

access to the data stored in the shared state area.

16. (Once Amended) The computer-readable medium of Claim 9 further comprising instructions for performing the steps of:

spawning the first virtual machine instance by instantiating a data structure associated with a single session; and

[changing the state of said first virtual machine instance during execution of said virtual machine code by manipulating data] storing a pointer within said data structure to provide access to the data stored in the shared state area.